

PP-071

The One Year Determinants of Patients Which Show The Cardiovascular Mortality, Who were Hospitalized for Acute Decompense Heart Failure

Sati Sena Yıldız¹, Pınar Soysal², Mehmet Ali Çıkrıkçıoğlu²

¹Gökçekbey Public Hospital Internal Medicine Department, Zonguldak, ²Bezm-i Alem Vakıf Güreba Research and Training Hospital, 2. Internal Medicine Clinic, İstanbul

Aim: The presence of many blood count and biochemical parameters are known to show mortality in acute decompensated heart failure. In our study, we aimed to find the best markers showing mortality.

Method: 176 patients hospitalized due to ADHF were enrolled. Treatment modalities and comorbidities influencing leukocyte counts were excluded. Hemogram, ProBNP, D-Dimer, cardiac troponins, biochemistry, sensitive C-reactive protein, urinalysis and echocardiography were obtained. Cardiovascular deaths at the end of the first year were determined.

Results: WBC and absolute neutrophil count were significantly higher and absolute lymphocyte and absolute eosinophil counts were significantly lower in the deceased patients than patients survived. Groups were similar in terms of monocyte counts, BMI, ferritin, uric acid, free T3 (FT3), D-dimer, ProBNP, ejection fraction (EF), albumin, systolic dysfunction, mitral regurgitation, hypotension, hyponatremia, acute renal failure were significantly different among dead and surviving patients. Logistic regression analysis employing these variables showed that low BMI, low albumin, low EF, hyponatremia, low absolute eosinophil count, and low FT3 as a whole were responsible from the 81.8% of cardiovascular deaths. Death rate among patients with an absolute eosinophil count of $\leq 20/\text{mm}^3$ was 4.8 fold higher than the patients with an absolute eosinophil of $>20/\text{mm}^3$.

Conclusion: In our study, in ADHF, six levels associated with prognosis were worth significantly more than others: the EF Low, low BMI, hypoalbuminemia, free T3, hyponatremia, eosinopenia. Eosinopenia is thought to be due to increased sympatho-adrenarjic activity.

PP-072

Elevated Galectin-3 Levels are Related with Increased Volumes in Systolic Heart Failure Patients

Esra Gucuk Ipek¹, Senay Akin Suljevic², Habibe Kafes⁴, Funda Basyigit³, Neslihan Karalok¹, Yesim Guray⁴, Lale Dinc Asarcikl⁴, Haydar Demirel²

¹Polatli Hospital, Ankara, ²School of Sports Sciences and Technology, Hacettepe University, Ankara, ³Cinnah Heart Center, Cardiology Department, Ankara, Turkey, ⁴Yuksekk İhtisas Hospital Cardiology Department, Ankara

Background and Aim: Galectin-3 is a new biomarker assumed to reflect cardiac remodelling and fibrosis in patients with heart failure. The factors that alter galectin-3 levels are unknown. In this study, we aimed to evaluate the relationship between galectin-3 levels and echocardiographic parameters in symptomatic heart failure patients.

Methods: Twenty eight patients with systolic heart failure (ejection fraction ≤ 35 , NYHA class II, III) and 17 age-matched controls with normal ventricular functions were enrolled to the study. Echocardiographic measurements were noted and serum samples were obtained for galectin-3 levels.

Results: The mean age of the patients was 64.7 ± 10 , 67% of the patients were male. Of all patients, 9% had diabetes and 51% had hypertension. Most of the heart failure patients (89%) had ischemic cardiomyopathy, 68% of them had NYHA II symptoms. The mean galectin-3 levels were significantly higher in heart failure patients compared to control group (1.13 ± 0.42 ng/ml vs. 0.6 ± 0.26 ng/ml, $p=0.0001$). There was no significant difference in galectin-3 levels between patients with NYHA II and NYHA III symptoms ($p=0.53$). There was a strong correlation between left atrium volume ($r=0.39$, $p=0.008$), left ventricular end systolic diameter ($r=0.55$, $p=0.0001$), left ventricular end diastolic diameter ($r=0.45$, $p=0.002$), left ventricular end systolic volume ($r=0.58$, $p=0.0001$), left ventricular end diastolic volume ($r=0.46$, $p=0.001$), left ventricular ejection fraction ($r=-0.58$, $p=0.0001$) and galectin-3 levels. Patients were classified into three groups according to their galectin-3 tertiles (<0.68 , $0.68-1.11$, >1.11 ng/ml). The number of male patients was significantly higher in the third tertile ($p=0.02$). Left ventricular end systolic diameters ($p=0.0001$), left ventricular end diastolic diameters ($p=0.01$), left ventricular end systolic volumes ($p=0.0001$), and left ventricular end diastolic volumes ($p=0.005$) were increased in second and third tertiles.

Conclusions: Galectin-3, a fibrosis related biomarker, is elevated in patients with symptomatic heart failure and has a strong correlation with increased left ventricular volumes.

PP-073

Prognostic Role of Echocardiographic Parameters in Heart Failure Patients with Incidental Massive Pleural Effusion Diagnosed During Echocardiographic Evaluation

Süleyman Ercan¹, Vedat Davutoğlu¹, Muhammed Oylumlu², İbrahim Halil İnanç¹, Mehmet Kaplan¹

¹Department of Cardiology, University of Gaziantep, Gaziantep, ²Department of Cardiology, University of Dumlupınar, Kütahya

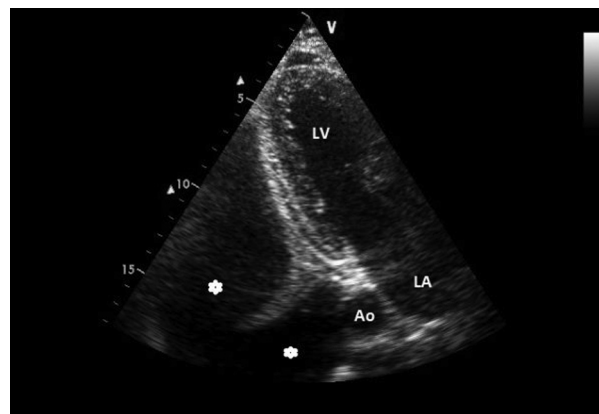
Aim: The prognostic significance of patients with heart failure complicated with pleural effusions determined by means of echocardiography is lacking. Thus we

sought to determine the prognostic significance of transthoracic echocardiographic parameters at heart failure patients with pleural effusion which was evaluated incidentally during echocardiographic evaluation.

Methods: Between Jan 2002 and Dec 2012, total 151 patients with heart failure suffered from pleural effusion analysed. All patients mortality data are derived from registry center of Social Insurance Institution which officially responsible for recording all mortality data in Turkey. The diagnosis of patients' pleural effusion status were made during echocardiographic evaluation. Kaplan-Meier survival rates were determined and subgroups were compared with log-rank test and Chi-square test.

Results: Total 151 eligible patients were analysed. Mean age was 60 ± 16 with 97 men (64.2%) and 54 women (35.8%). Mean duration of follow-up was 71.5 ± 45.6 months. Fifty-one patients (33.8%) died during this follow-up period. There was not a significant difference regarding age and sex between survivors and those had died during follow-up. There were no prognostic significance of left ventricular end diastolic diameter, ejection fraction, mitral insufficiency, tricuspid insufficiency, and estimated pulmonary artery pressure ($p>0.05$). However dilated left atrium diameter was found to be associated with a poor prognosis ($p=0.04$).

Conclusion: Dilatation of the left atrium has a worse prognostic significance in patient with heart failure complicated with pleural effusion determined by means of echocardiography. It is no seems to have prognostic significance of other echocardiographic parameters including left ventricular end diastolic diameter, ejection fraction, mitral insufficiency, tricuspid insufficiency, and estimated pulmonary artery pressure.



PP-074

Galectin-3 in a Sample of Hospitalized Class IV NYHA Heart Failure Patients

Luiz Filipe De Menezes Falcão¹, Rudolf A. De Boer²

¹Faculdade de Medicina de Lisboa, Portugal, ²University of Groningen, The Netherlands

Aims: Galectin-3 is an emerging biomarker in heart failure (HF). Almost all data on galectin-3 have been derived from post hoc analyses from randomized clinical trials. Data from real-time populations addressing the distribution and usefulness of galectin-3 are lacking. This study was conducted to determine the clinical and biochemical correlates of galectin-3 in hospitalized class IV NYHA HF patients admitted for pharmacological therapy.

Methods and Results: We included 18 HF patients, with hypertension and ischemia as main etiologies; patients were caucasian; median age 78 (mean age 73 ± 14); 7 males (38.9%), 11 females (61.1%); 11 were in sinus rhythm and 7 in atrial fibrillation; median BMI was 27, median creatinine $115 \mu\text{mol/mL}$, median galectin-3 25.3 ng/mL. Median NT-proBNP was 10019 pg/mL. Galectin-3 was substantially elevated in all patients, positively correlated with creatinine (Spearman Coefficient of 0.54 ; $p=0.02$) but not with NT-proBNP. Of our patients, concerning echocardiography data, 8 (44%) had HF with preserved EF ($\geq 50\%$) and 10 (56%) had HF with reduced EF ($\text{EF} < 50\%$). In the group with $\text{EF} \geq 50\%$, the median LVEDV was 111 ml and in the group with $\text{EF} < 50\%$ the median LVEDV was 167 ml ($p=0.04$); in the group with $\text{EF} \geq 50\%$, the median LVESV was 48 ml and in the group with $\text{EF} < 50\%$ the median LVESV was 98 ml ($p<0.01$). Galectin-3 was equally elevated in both HFPEF or HFREF, and its correlations with creatinine, NT-proBNP, echo parameters of LV (LVEDD, LVESD, LVEF) and LA (LA diameters and volumes) were comparable in HFPEF and HFREF groups.

Conclusions: Galectin-3 levels are elevated in all patients with HF, and galectin-3 was positively correlated with creatinine but not with NT-proBNP. Galectin-3 was similarly elevated in HFPEF and HFREF in this contemporary HF cohort.